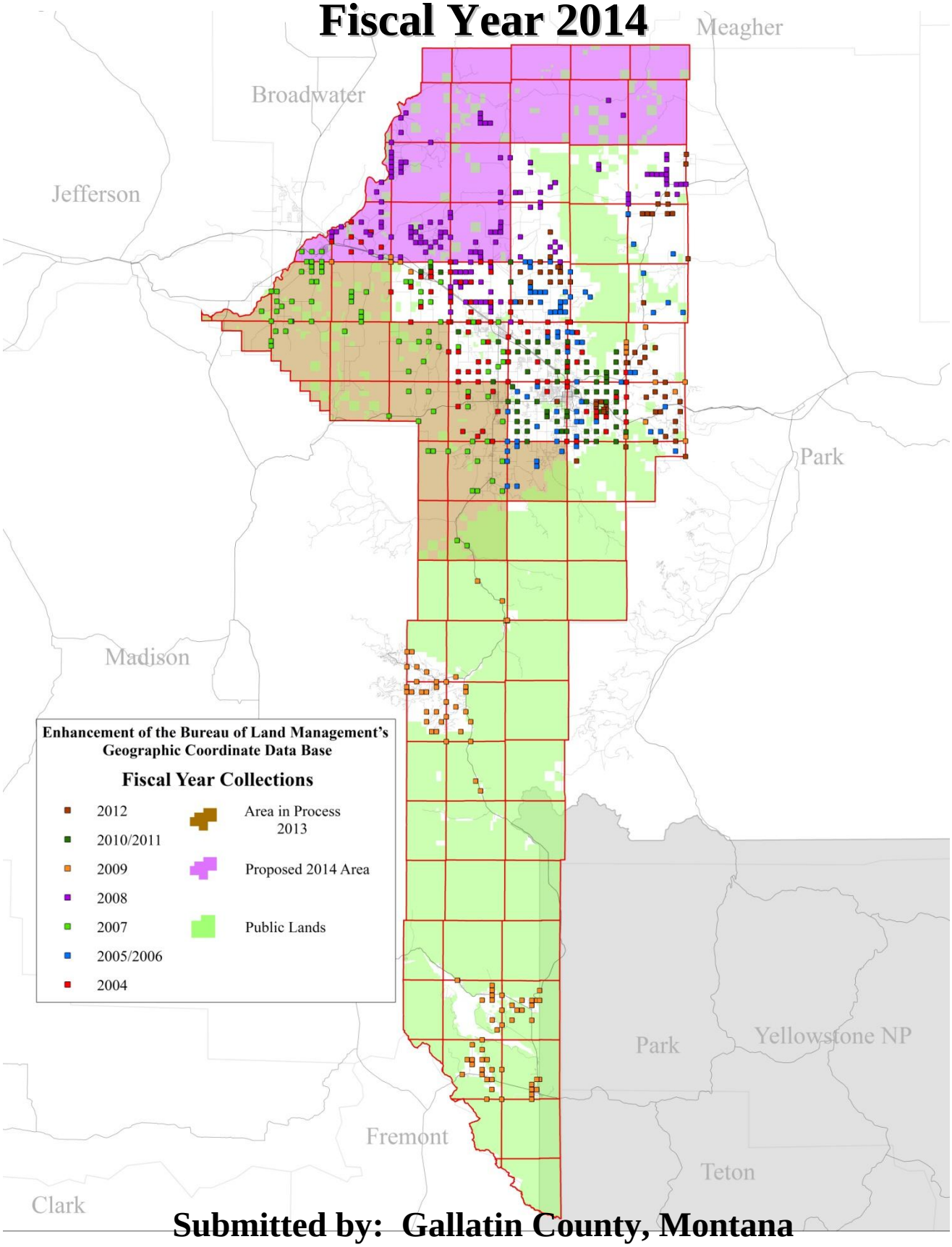
Grant Application
Montana Land Information Act
Fiscal Year 2014



Submitted by: Gallatin County, Montana

APPLICANT INFORMATION

Applicant Name Gallatin County Geographic Information Systems Department

Principle Individual Allen Armstrong, GIS Manager

Agency Gallatin County Local Government

Mailing Address 311 W. Main Street, Courthouse, Rm. 305

City Bozeman

County Gallatin

State Montana

Zip 59715

Contact Email allen.armstrong@gallatin.mt.gov

Contact Fax (406) 582-3003

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Department Geographic Information Systems

PARTICIPATING PARTNER

Principle Contact William C. Grayson, Land Surveyor

Agency U.S.D.A. Bureau of Land Management

Mailing Address 5001 Southgate Drive, P.O. Box 36800

City Billings

County Yellowstone

State Montana

Zip 59107

Contact Email wgrayson@blm.gov

Contact Telephone (406) 896-5009

PARTICIPATING PARTNER

Principle Contact Stewart Kirkpatrick

Agency State GIS Coordinator, Montana State Library

Mailing Address 1515 E. 6th Ave, PO Box 201800

City Helena

County Lewis and Clark

State Montana

Zip 59620

Contact Email skirkpatrick@mt.gov

Contact Telephone (406) 444-9013

PARTICIPATING PARTNER (Non-Funding)

Principle Contact Janet Kempff, USFS Surveyor

Agency US Department of Agriculture, Forest Service

Mailing Address Federal Building, PO Box 130

City Bozeman

County Gallatin

State Montana

Zip 59771

Contact Email jkempff@fs.fed.us

Contact Telephone (406) 587-6701

ADDITIONAL PARTICIPATING PARTNERS

Local Surveying Community

The Local Surveying Community will benefit from contracts with Gallatin County and available Public Land Survey System (PLSS) control data collected and uploaded to the Montana Control Point Database. Also, additional corner records will be filed and kept in the Clerk and Recorder's Office for future reference by the public and Surveyors/Engineers needing coordinate references.

DATE SUBMITTED

Date Submitted February 11, 2013

DATE RECEIVED

Date Received

DESCRIPTIVE TITLE OF PROJECT

Enhancement of the Bureau of Land Management's (BLM) Geographic Coordinate Data Base (GCDB) through Control Surveys, supplementing the Geodetic Control Theme as a means for adjusting the Cadastral Theme and the Administrative Boundary Theme within Gallatin County, Montana and Southwestern Montana. This Geodetic Control Theme Project is year 4 of a 5 year, Phase II project which follows a successfully completed 5 year Phase I project which ran from 2005 to 2009.

RELEVANCE AND PUBLIC BENEFIT

This project closely aligns with the following Land Plan Priority 2013/2014 Montana Land Information Plan:

Category B1 – MSDI Data Partner Support.

After a 2004 adjustment to the GCDB control in Gallatin County, which was the first control collection effort undertaken in this region, the cadastral data of the county began to be recognized as a valuable asset to all public and private users. Subsequent efforts to collect and document control points, adjust the GCDB and then adjust the cadastral data has only continued to make this layer of data in Gallatin County increasingly useful to all users. With data previously in excess of 300 feet off, select areas that were practically unusable due to positional accuracy have now been aligned to acceptable useful levels.

Gallatin County has committed to continuing forward with methods outlined in this project until such a time that positional accuracy of 3-5 meters is achieved countywide. Gallatin County believes this project is very closely tied to the priorities of the 2013/2014 Land Information Plan updating three MSDI Themes.

To meet the purpose of the 2013/2014 Montana Land Information Plan the following action items have, and will continue to take place:

- Advance the collection of the Geodetic Control Theme throughout Gallatin County, Montana
  - Collection of coordinate data for the BLM GCDB
  - Locate, collect, photograph, document and preserve control points before more are destroyed through development
  - Data collected by Registered Land Surveyors to validate accuracy and integrity
  - Data collection standards strictly followed
  - Provides accuracy and certainty to business applications based on accurate land records
- Refine the accuracy of the Cadastral Theme for Federal, State, Local and Private interests
  - Adjust a completed and maintained cadastral layer to useful levels of accuracy
  - Will leverage an existing commitment of funds and maintenance personnel in Gallatin County
  - Continues forward with a proven process designed by the Montana State Library for adjustments
  - Interagency data integration for customized applications

■ Refine the accuracy of the Administrative Boundaries Theme for Federal, State, Local and Private interests

Builds a reliable and usable layer of accurate administrative boundaries for all to use
Data sharing among agencies is opened considerably
Boundary questions and discrepancies are removed between agencies
Informational exchange across administrative boundaries

■ Establish collaborative partnerships between the GIS and Surveying Communities in Montana

Data made available to all coordinate reference users
Enhances the usefulness of GIS data to the non-GIS professional
Demonstrates the connectivity of Geodetic Control from local surveyors with GIS and Cadastral data
Process currently in place engaging local municipalities
Develop and upload control to the Montana Control Point Database

SCOPE OF WORK

Gallatin County has developed a long-term plan that leverages MLIA funds and establishes the internal and external partnerships to enhance the Geodetic Control Theme by working with internal departments, Registered Land Surveyors, the BLM and the US Forest Service in a joint GCDB Accuracy Enhancement Process.

Gallatin County has completed 5 years of our 5 year countywide Phase I Geodetic Control Theme Project. Sustainability and commitment is most certainly being demonstrated within Gallatin County through internal momentum and budget allocation towards the completion of this overall project through Fiscal Year 2015. Gallatin County GIS is also committed to maintaining our adjustments to the Cadastral and Administrative Boundaries themes as new GCDB Control Surveys are completed, reviewed by the Montana State Library, and integrated into the Geodetic Control Theme.

Phase II, years 1 and 2 are now completed. Year 3 is currently underway for Fiscal Year 2013. Phase II looks at the entire county again and targets areas of unacceptable control shift, collecting control points that may or may not have existing corner record monuments. These targeted points may be more difficult to locate in the field or may ultimately require a complete re-monumentation. Points will be selected for their locations critical to the refinement of GCDB control in a given geographic area. Phase II project work will collect less control points in number than Phase I; however, Phase II control points will indeed be more difficult to collect but may weight more heavily in the control adjustment.

Phase II maximizes our control point numbers by taking advantage of any available survey control data currently being managed by the USDA Forest Service. With over 40% of Gallatin County managed by the USDA Forest Service, the Forest Service data may contribute heavily to the GCDB adjustment in townships containing public lands. This kind of partnership will be generated at the local level by involving USFS Surveyors in the planning stages for each Phase II project. Records from the local Forest Service office are open to us and will be further researched as to their individual usefulness by our contracted surveyor.

GOALS, OBJECTIVES AND TASKS

Involve Local Surveyors in the Process and Generate Project Buy-In

■ **Develop a Pre-Qualified List of Local Registered Land Surveyors**

Gallatin County released a second Call for Land Surveying Services SOQs in June of 2010 to all local and several surrounding area Engineering/Surveying firms to develop a pre-qualified list for Land Surveying Services. As a result of prior surveying projects that Gallatin County has contracted there is a better understanding for the need of control and a partnership that has developed with the local surveyors as they see the results of their work impacting the positional accuracy of the cadastral layer they all use regularly statewide.

Final interviews determined the ranking of the top 4 firms, developing the pre-qualified list as follows:
1 – Stahly Engineering and Associates, Inc.
2 – Roen, Inc.
3 – Morrison-Maierle, Inc.
4 – Gaston Engineering and Surveying, P.C.

Develop an Overall Geographic Plan

■ Divide the Geographic Areas into Manageable Blocks

GCDB Control Surveys throughout Gallatin County covered a total of 73 Townships during Phase I of the Geodetic Control Theme Project. In Phase II there are a total of 66 Townships that are planned for refined Control Surveys that will supplement Phase I data.

Illustrated in Figure 1 are the Townships with Control Surveys completed in Fiscal Year 2004 during a Pilot Project with the BLM. Figure 2 indicates the Townships in Gallatin County that were planned and covered during Phase I of the Geodetic Control Theme Project with the Control Survey areas colored by Fiscal Year.

Figure 3 displays the Phase II Geodetic Control Theme Project geographic areas that are proposed for Fiscal Years 2010 through 2015 with 2011 combined with Fiscal Year 2010. Again, geographic areas are color coded by the Fiscal Years projected for the duration of this Phase. Geographic areas with the most development have proven to exhibit the largest Cadastral Theme errors in the past. The boundaries for the Phase II Geodetic Control Theme Project have been re-aligned to cover these areas more efficiently.

Jurisdictional areas impacted by this project include land administered by the Gallatin National Forest, BLM, National Park Service, State of Montana and Gallatin County, as well as the Municipalities of Bozeman, Belgrade, Manhattan, Three Forks and West Yellowstone. The Local Surveying Community (on-board with our plan), public users and all partners mentioned who receive adjusted data on a regular on-going schedule will reap the benefits in their applications, research and integrity of the GIS data.

This Fiscal Year 2014 Project Plan covers year 4 in the Phase II Geodetic Control Theme Project, which is part of a 5-year project plan in the overall 10 year life cycle. Townships covered under this project will include the following and will be referred to as the contracted townships collection areas:

T 2N R 1-4E T 3N R 2-4E T 4N R 2-7 E T 5N R 3-7 E

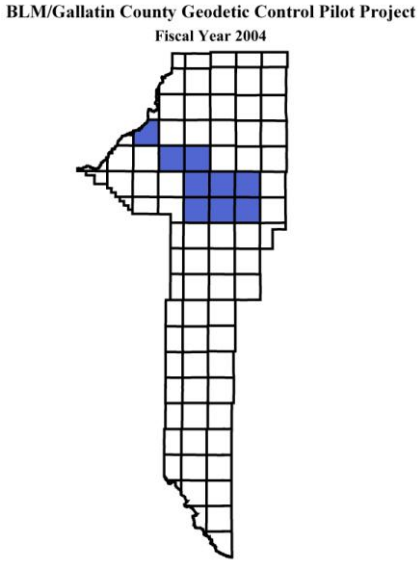


Figure 1.

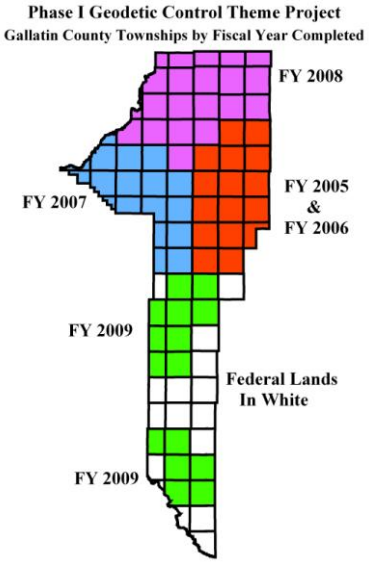


Figure 2.

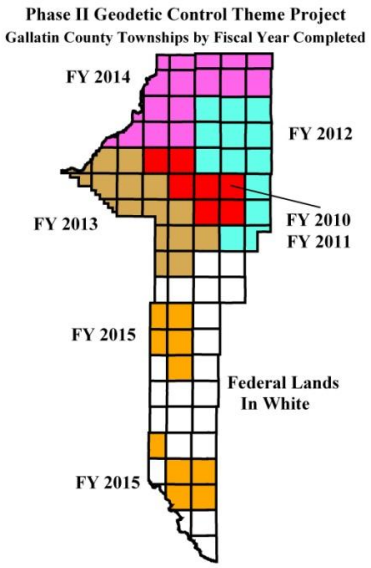
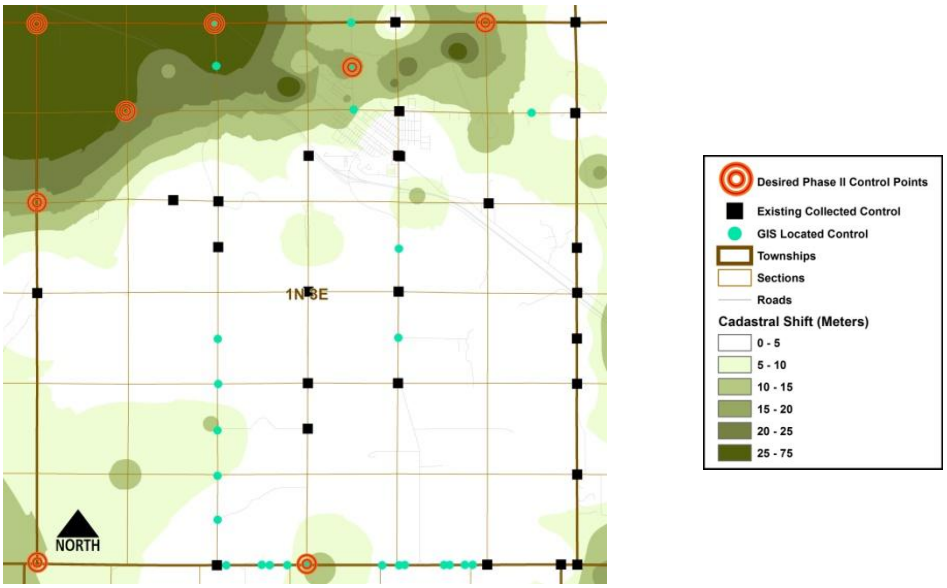


Figure 3.

Prioritize Target Control

■ Devise a 1st, 2nd and 3rd Choice Control Point Plan for the Field

GIS staff developed a Spatial Analyst Cadastral Shift Analysis to aid in determining areas that will require further adjustment in the Phase II project timeframe. Prior collection of control has proven to reduce the degree of shift to the Cadastral Theme. Additional collection during the Phase II projects will seek to eliminate these areas of unacceptable shift.



Meetings between representatives from the Montana State Library, the BLM, Forest Service and Gallatin County will review this spatial analyst data and determine the optimum locations for additional control, weighting that decision against existing control already collected for the GCDB and located control gathered by the GIS staff field mapping efforts. This pre-planning is intended to make the most effective use out of existing points and provide the necessary target control points for discovery by the Registered Land Surveyors.

Project Maps Created

■ Corner Records Maps and Control Point Plan Maps for Surveyors Printed

Previous survey points, USFS points, and existing BLM GCDB points will be compiled into a readable format that can be used to create detailed township map pages. These individual map pages will be reviewed for correctness by the project representatives and used by the potential contractors to produce cost estimates.

Create a Contractor Scope of Work

■ Approve Legal Contract(s) Between Surveyor(s) and Gallatin County

Following the legal process of contracting with Gallatin County, negotiate fees and services with the selected surveying contractor(s) and approve through a County Commission public meeting.
Emphasis will be placed on efficiency in the field and collecting the maximum number of points for the budget dollars. A hard cost estimate will be reviewed by the selected contractors and the best price selected with a not to exceed amount specified.

Field Geodetic Control Surveying

■ Conduct the Field Control Point Collection Throughout the Project Area

Performed by a Registered Land Surveyor using Geodetic Control Processing with a positional accuracy statement for each point. Field notes and Corner Records re-established where applicable with any necessary corner records recorded with the Clerk and Recorder. Standards and Guidelines for Cadastral Surveying from the BLM will be followed. Control points will be entered into the State Survey and Mapping Control (SUMAC) database template and submitted to the Montana Control Point Database.

Upload of New MSDI Data

■ Submittal of Data to BLM and the Base Map Service Center

Control Surveys submitted to BLM for review and acceptance by BLM staff. Field maps printed for BLM review and geographic position reference. Refinement of deliverables will be made by Gallatin County, or Gallatin County's Contracted Registered Land Surveyor, per any BLM recommendations. GCDB geodetic control adjustment will be conducted within the timeframe of the BLM and MSL resulting in readjusted township PLSS data.

Update Dependant Themes

- **Adjustment of Gallatin County Cadastral Theme to the New GCDB**
- **Adjustment of Gallatin County Administrative Boundaries Theme to the New GCDB**

Adjustment of Gallatin County parcel data using the ArcMap script approved by the Montana State Library. Once the adjustment is acceptable, perform the same adjustment to all Gallatin County Administrative Boundaries that are based on the Cadastral Theme. Cadastral Theme updates and Administrative Boundaries updates submittal to the Montana State Library.

Modify any registered data with the Montana GIS Portal and submit any new information as needed.

PROJECT SCHEDULE

The Timeline for each Fiscal Year Project, within each Phase, has been and likely will continue to be the same barring any unforeseen weather situations. Although each Fiscal Year Control Survey overlaps calendar years, the Fiscal Year in which the first Task begins is considered the Fiscal Year for that Control Survey.

TASKS	CALENDAR FISCAL YEAR 2014					
	July – August	September - October	November - December	January - February	March - April	May - June
Involve Local Surveyors in the Process and Generate Project Buy-In						
Develop an Overall Geographic Plan						
Prioritize Target Control						
Project Maps Created						
Create a Contractor Scope of Work						
Field Geodetic Control Surveying						
Upload of New MSDI Data						
Update Dependant Themes						

PROJECT MANAGEMENT AND ORGANIZATIONAL CAPABILITY

The mission statement of the Gallatin County GIS Department reads as follows:

"Coordinate the development and management of complete, timely and accurate geographic information system (GIS) data to support users of geographic data in effective decision making within Government; thereby, working smarter to meet the growing demands of Gallatin County. Promotes user-friendly applications and provides technical assistance and training to migrate data, applications and timely information into the hands of Gallatin County Departments and Emergency Services. Develops data standards and formats resulting in effective public safety management, informed government operations, elimination of redundancy, and increased service to the public."

The GIS Department has taken a very active role in both Phases of this Geodetic Control Theme Project. The success achieved over these numerous years of collection and adjustments has served as a blueprint for other local governments to follow on similar projects. Because Gallatin County has committed budgeted funds to this program every year, there demonstrates an internal commitment to continue forward from the elected Commissioners and other elected Department Heads. The local users in the community, especially the surveyors are witnessing a transformation in the GIS data as a direct result of their efforts and contributions of control necessary to adjust the GCDB theme. They also are witness to the fact that the GIS developers recognize the reliance on the Registered Land Surveyors and respect their expertise in the area of geodetic control.

In order to take an even greater proactive role in locating and documenting potential control, thereby, reducing the research cost paid to the Registered Land Surveyors and increasing production in the field, all staff listed here have incorporated a control point research component into their field work. Starting during the field season of 2010, the GIS staff began building a database of discovered control beyond that which has already been located and surveyed. Potential GCDB control points were pulled from the BLM data and selected based on proximity to roadways, driveway, trails and canal waterways, with special attention given to the identified high-shift areas. As staff works throughout the county, all field software alerts staff to the proximity of a potential control point. Points are investigated and mapped at a resource-grade level, if located, with a Trimble Juno and photographed for future identification. As this project continues, these points may be professionally surveyed if they are determined to be a critical point to adjust the overall GCDB theme.

Allen Armstrong, GIS Manager, GISP – Mr. Armstrong will oversee all activities conducted on this project and will provide the direct management of other staff from Gallatin County. Mr. Armstrong has over 21 years of extensive GIS management experience and has been involved in all phases of the Geodetic Control Theme project since 2004. Mr. Armstrong is Gallatin County's database administrator and will be in charge of all deliverables to the BLM or the Base Map Service Center. Mr. Armstrong has successfully managed other long-running and technical projects such as:

Gallatin County's GIS Development and Strategic Implementation Plan since 1997
Gallatin County's Disaster Mitigation Awareness and Preparation Community HAZUS Plan
State of Vermont E911 GPS Address Mapping and GIS Landbase Development

Frank Dougher, GIS Analyst – Mr. Dougher will be responsible for assisting with the control collection planning, coordinating with Surveyors, and assisting with the final deliverables. Mr. Dougher, has over 16 years of GPS experience and has assembled the data set of control points collected and photographed by the Gallatin County GIS staff.

Leo Pidgeon, GIS Technician Analyst – Mr. Pidgeon is situated in the Gallatin County Clerk and Recorders office and will be responsible for research, access and copying any and all Corner Records for the project area. Mr. Pidgeon has had an extensive surveying background in Montana and California and is intimately familiar with this control point project. Mr. Pidgeon is responsible for any updates to the cadastral layer and will be involved in the task of adjusting the Cadastral Theme and Administrative Boundaries Theme.

Registered Land Surveyors – The following firms were selected in the top 4 from a released Call for Land Surveying Services SOQ in June of 2010 and are on Gallatin County's pre-qualified list. At least one, if not more of these firms will be involved in this project:

Stahly Engineering and Associates, Inc.
Roen, Inc.
Morrison-Maierle, Inc.
Gaston Engineering and Surveying, P.C.

BUDGET

Gallatin County has estimated 10 years for completion of Phase I and Phase II of this project. In-kind contributions consist of staff time and budgeted contract funds by Gallatin County. Costs associated with the project are mainly associated personnel needed to pre-plan project areas, prepare contract materials, coordinate with contractors, research and review fieldwork, as well as the analytical GIS adjustment of the dependant GIS themes. Current hourly rates for salaries and fringe benefits were adjusted upward by about 4% annually to account for the probable salaries that would be in effect at the time each forecasted project Phase begins. A detailed budget table by Fiscal Year showing the estimated costs for all categories is provided in this section.

Salaries and Wages: Personnel from the Gallatin County Geographic Information Systems Department will be the only staff required for these project phases.

Fringe Benefits: The amount assigned to fringe benefits is 31.7% of the salaries and wages of County employees. These include health and unemployment insurance, workers compensation, FICA & Medicare, and retirement.

Travel: No travel costs are anticipated. Travel costs by MSL, BLM and GIS staff will be considered in-kind.

Equipment: No equipment costs are anticipated. Existing hardware/software will be utilized.

Supplies: Supplies include minor office incidentals and plotting supplies for field Survey plots.

Contracted Services: Professional contract services provided by Registered Land Surveyors will be paid for the Control Surveys. Contracts will be written and administered by Gallatin County based on a submitted Scope of Work with a not to exceed amount for time and materials.

Other: These costs include Gallatin County Grants Administration fees which are required by Gallatin County and calculated at 7.28% of the total grant funds. These funds will be paid to Grants by the GIS Department, and are being provided as matching funds. Having the Grants Department administer this project will ensure adequate grant reporting for Federal, State and Gallatin County administrative requirements.

FISCAL YEAR 2005/2006 ACTUAL BUDGET SUMMARY – PHASE I
Total Expended by Gallatin County = $32,538.00
Total MLIA Share = $0.00

FISCAL YEAR 2007 ACTUAL BUDGET SUMMARY – PHASE I
Total Expended by Gallatin County = $32,636.00
Total MLIA Share = $0.00

FISCAL YEAR 2008 ACTUAL BUDGET SUMMARY – PHASE I
Total Expended by Gallatin County = $25,225.20
Total MLIA Share = $20,000.00

FISCAL YEAR 2009 ACTUAL BUDGET SUMMARY – PHASE I
Total Expended by Gallatin County = $24,527.00
Total MLIA Share = $20,000.00
Total PARTNER-ITSD Share = $7,500.00

FISCAL YEAR 2010 ACTUAL BUDGET SUMMARY – PHASE II
Total Expended by Gallatin County = $24, 646.00
Total MLIA Share = $20,000.00

FISCAL YEAR 2011 – No MLIA Grant Application Submitted
(An internal email block precluded us from receiving any MAGIP emails and the deadline was missed)
Combined with FISCAL YEAR 2010 and finished in FISCAL YEAR 2011

FISCAL YEAR 2012 ACTUAL BUDGET SUMMARY – PHASE II
Total Expended by Gallatin County = $15, 202.00
Total MLIA Share = $10,000.00

FISCAL YEAR 2013 *PROJECTED* BUDGET SUMMARY – PHASE II
Total Expended by Gallatin County = $15, 346.00
Total MLIA Share = $10,000.00

FISCAL YEAR 2014 ESTIMATED BUDGET SUMMARY FORM – PHASE II

CATEGORY	GALLATIN CNTY SHARE	MLIA SHARE	OTHER SHARE	TOTAL
1. SALARIES/WAGES	$2,790	$0	$0	$2,790
2. FRINGE BENEFITS	$884	$0	$0	$884
3. TRAVEL	$0	$0	$0	$0
4. EQUIPMENT	$0	$0	$0	$0
5. SUPPLIES	$160	$0	$0	$160
6. CONTRACTED	$15,000	$15,000	$0	$30,000
7. OTHER	$1,092	$0	$0	$1092
TOTAL $	$19,926	$15,000	$0	$34,926

Several financial budgetary situations internal within Gallatin County have forced the County Commission to cut department budgets in recent years. A proposed half-step increase towards past funding will be presented in Fiscal Year 2014 with anticipation of full project funding again in Fiscal Year 2015. The return to original funding is warranted for these last two Phase II years because of the geographical distances that need to be covered.

FISCAL YEAR 2015 ESTIMATED BUDGET SUMMARY FORM – PHASE II

CATEGORY	GALLATIN CNTY SHARE	MLIA SHARE	OTHER SHARE	TOTAL
1. SALARIES/WAGES	$2,902	$0	$0	$2,902
2. FRINGE BENEFITS	$920	$0	$0	$920
3. TRAVEL	$0	$0	$0	$0
4. EQUIPMENT	$0	$0	$0	$0
5. SUPPLIES	$170	$0	$0	$170
6. CONTRACTED	$20,000	$20,000	$0	$40,000
7. OTHER	$1,456	$0	$0	$1,456
TOTAL $	$25,448	$20,000	$0	$45,448

Future MLIA funding was not originally anticipated beyond Fiscal Year 2015. With the amount of effort put forth in this project for the full 10 years, there is expected to be enough local support from the GIS community and the local surveyor community that momentum will hopefully exist to contribute data to the Montana Control Point Database. From the Spatial Analyst Cadastral Shift Analysis performed across this region we also can focus our field work on specific geographic areas to save time and effort. Adjustment to the fully corrected GCDB is anticipated to have some lag time as a result of the BLM GCDB contracting effort.

STATEMENTS OF SUPPORT

MONTANA State Library

PO Box 201800 1515 East 6th Avenue Helena, MT 59620 (406) 444-3115

February 11, 2013

Allen Armstrong
Gallatin County GIS Dept.
311 W. Main
Bozeman, MT 5971

Dear Allen:

As Montana Spatial Data Infrastructure stewards of the Cadastral, Geodetic Control and Administrative Boundary themes, we highly encourage data contributors to use and improve the Bureau of Land Management's (BLM) Geographic Coordinate Database (GCDB). Since 2005 Gallatin County has developed and managed a GCDB enhancement program, collecting GPS coordinates on PLSS monuments and supplying that to data to the BLM in a standardized format. This program is an annual line item in the County's budget. These data have also been entered into the MSDI Montana Control Point Database (MCPD). Gallatin County applied for, received and successfully administered MLIA grants for GCDB enhancement in FY 2009, FY 2010, FY12 and is presently working on a FY13, year 3, phase 2 enhancement project.

For FY14 Gallatin County is requesting MLIA funding support for year 4 of Phase 2 GCDB enhancement. As State GIS Coordinator, and along with the MSDI theme leads for Cadastral, Geodetic Control and Administrative Boundaries, we strongly support Gallatin County's long term GCDB enhancement program and their FY 2014 request for MLIA funding.

Sincerely,

Stewart Kirkpatrick
State GIS Coordinator
Montana State Library

RENEWABLE GRANT ACCOUNTABILITY REPORTS

Gallatin County
Department of Geographic Information Systems
311 West Main, Room 305
Bozeman, Montana 59715
406-582-3049

January 07, 2013

Mr. William Grayson
Department of the Interior
Bureau of Land Management
5001 Southgate Drive
Billings, MT 59101

Dear Bill:

Gallatin County is sending control point data to the BLM from our recent contract deliverables completed by our surveyors as part of the 2012 project year GCDB work. Enclosed is an overall plot representing the GPS survey points collected by our contract Registered Land Surveyor, Stahly Engineering and Associates, Inc. There is one disk enclosed with all the final data in SUMAC format for our 2012 GCDB project.

Please use this control point data with the GCDB Measurement Management software to re-compute the GCDB and include the resulting data in the Geodetic Control Theme for Gallatin County and Montana.

Please let me know if there is anything additional you need from my office or the surveyors concerning this data, or if any changes are needed to the SUMAC data format. We will assume that this GPS survey data will become part of the overall GCDB unless we hear otherwise.

Gallatin County anticipates moving forward immediately with a Notice to Proceed to Stahly Engineering and Associates, Inc., for the 2013 project. Please let me know if there are any preparation concerns that I can relay back to Stahly as they begin planning for the next project phase. Thank you again for your participation on this project and your continued assistance.

Best Regards,

Allen J. Armstrong
GIS Manager
Gallatin County GIS Department

Cc: Stu Kirkpatrick, State GIS Coordinator

STATUS REPORT

Montana Land Information Act 2013 Grant

To: Stewart Kirkpatrick
State GIS Coordinator
Montana State Library
1515 E. 6th Ave, PO Box 201800
Helena, MT 59620

From: Allen Armstrong
Gallatin County GIS Department
Gallatin County, MT

Date: 01/10/2013

In preparation for year 3 of our 5 year, Phase II Enhancement of the BLM's GCDB project, Gallatin County GIS completed a Spatial Analyst Cadastral Shift Analysis to aid in determining areas requiring further adjustment in the GCDB control to aid in adjusting the Cadastral Theme for Gallatin County.

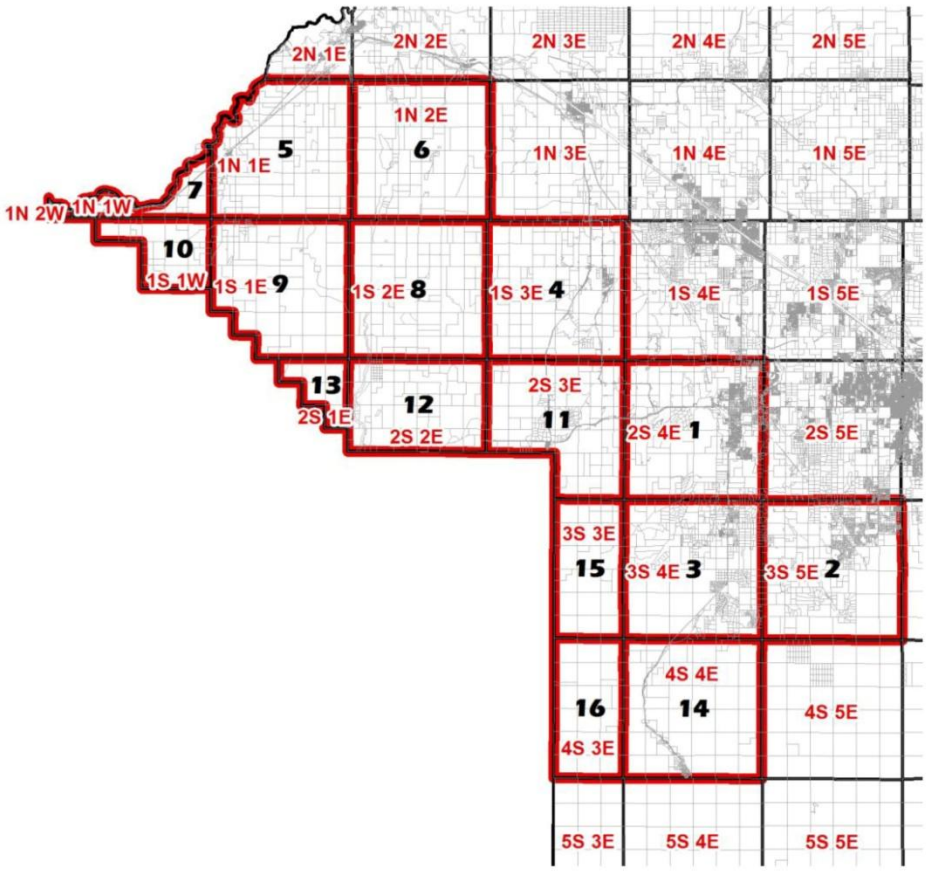
Phase II looks at the entire county again and targets areas of unacceptable control shift, collecting control points that may or may not have existing corner record monuments. These targeted points have proven to be more difficult to locate in the field or may ultimately require a complete re-monumentation. Points have been selected for their locations critical to the refinement of GCDB control in a given geographic area. A hardcopy of the Shift Analysis for each project township is included with the identified Proposed Control points located. Please review these Proposed Control points based upon your expertise in GCDB enhancement.

The surveyors will be instructed to pick up as many points as they can within the budget, however, these identified Proposed Control points are to be given the highest priority. If possible, the Proposed Control indicated is to be collected. In the event the target point is not found, a reasonable attempt will be made to collect one in close proximity to the point indicated. A final resort will be to re-establish these Proposed Control points if it is determined that control at that given location is critical. These points were selected to balance the placement of all collected control points, thereby providing the best adjustment to the GCDB and eliminating these areas of unacceptable cadastral shift.

GIS identified a priority township plan to make sure we cover the areas with the largest parcel concentrations first. The list below identifies the project townships in the order of priority for field collection:

Project Townships in Priority Order

T 2S R 4E
T 3S R 5E
T 3S R 4E
T 1S R 3E
T 1N R 1E
T 1N R 2E
T 1N R 1W
T 1S R 2E
T 1S R 1E
T 1S R 1W
T 2S R 3E
T 2S R 2E
T 2S R 1E
T 4S R 4E
T 3S R 3E
T 4S R 3E



Prior to creating the Control Point Plan Maps for the surveyors I wanted to give you the opportunity to review this Control Point Plan. I will be in Helena next week for a MAGIP Board Meeting and plan to attend the Legislative Night Open House at the State Library. If we need to meet on this while I am there, please let me know. I look forward to your input. Thank you.

AUTHORIZED SIGNATURE

I hereby certify that the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.

I further certify that this project will comply with applicable statutory and regulatory standards.

I further certify that I am (we are) authorized to enter into a binding agreement with the Montana State Library to obtain a grant if this application receives approval.

_____ Date _____

_____
Signature and Title of Authorized Representative(s)
of Public Entity Applicant